Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A USB system for data communication between a processor and IDE devices, comprising:

a plurality of IDE devices;

a plurality of USB-to-IDE bridges, wherein each IDE device is connected to a respective USB-to-IDE bridge; and

a USB controller, wherein the USB-to-IDE bridges are connected to the USB controller via a USB bus, each USB-to-IDE bridge providing protocol conversion for communication between the corresponding IDE device and the USB controller, whereby the processor can communicate with the IDE devices via the USB controller.

2. (currently amended) The system of claim 1, wherein the USB controller is connected to the processor via a PCI bus ~~at least one of the IDE devices comprises a hard disk drive~~.

3. (Original) The system of claim 1, further comprising one or more USB hubs, each USB hub connected between two or more USB-to-IDE bridges and a USB controller.

4. (Currently amended) The system of claim 1, further comprising a plurality of USB controllers connected to the processor, wherein one or more USB-to-IDE bridges are connected to each USB controller via a USB bus, each USB-to-IDE bridge providing protocol conversion for communication between the corresponding IDE device and that USB controller, whereby the processor can communicate with the IDE devices via the USB controllers ~~wherein each IDE device can be utilized in hot plugging~~.

5. (previously presented) The system of claim 1, wherein one or more IDE devices can be connected/disconnected to/from the system while the system is operating.

6. (previously presented) The system of claim 1, wherein at least a third IDE device coupled to a corresponding USB-to-IDE bridge can be connected/disconnected to/from the USB controller while the system is operating.

7. (currently amended) The system of claim 1, further comprising at least one USB hub connected between a number of the USB-to-IDE bridges and ~~one of~~ the USB controller ~~controllers~~, whereby the processor can communicate with the IDE devices via the USB controller and the USB hub.

8. (Original) The system of claim 7, wherein one or more IDE devices can be disconnected from the system while the system is operating.

9. (Original) The system of claim 1, wherein at least one additional IDE device coupled to a corresponding USB-to-IDE bridge can be connected to the hub while the system is operating.

10. (currently amended) A method for connecting multiple IDE devices to a processor for data communication, comprising the steps of:

providing multiple USB-to-IDE bridges;

connecting each IDE device to a respective one of the USB-to-IDE bridges;

providing a USB controller; and

connecting the USB-to-IDE bridges to the USB controller via USB bus, each USB-to-IDE bridge providing protocol conversion for communication between the corresponding IDE device and the USB controller, whereby the processor can communicate with the IDE devices via the USB controller.

11. (currently amended) The method of claim 10, wherein the USB controller is connected to the processor via a PCI bus ~~at least one of the IDE devices comprises a disk drive~~.

12. (previously presented) The method of claim 10, further comprising the steps of hot plugging/unplugging one or more IDE devices to/from the USB-to-IDE bridges.

13. (previously presented) The method of claim 10, further comprising the steps of connecting/disconnecting one or more of the IDE devices to/from the system while the system is operating.

14. (previously presented) The method of claim 10, further comprising the steps of connecting/disconnecting at least a third IDE device coupled to a corresponding USB-to-IDE bridge, to/from the USB controller while the system is operating.

15. (Currently amended) The method of claim 10, further comprising the steps of:

providing at least one USB hub;

connecting each hub to a USB controller; and

connecting two or more USB-to-IDE bridges ~~controllers~~ to each hub, such that each hub is connected between a USB controller and two or more USB-to-IDE bridges ~~controllers~~.

16. (Original) The method of claim 15, further comprising the steps of disconnecting one or more of the IDE devices from the system while the system is operating.

17. (Original) The method of claim 15, further comprising the steps of connecting at least one additional IDE device coupled to a corresponding USB-to-IDE bridge, to one of the hubs while the system is operating.

18. (currently amended) A data storage system, comprising:

a plurality of IDE storage devices;

a plurality of USB-to-IDE bridges, wherein each IDE storage device is connected to a respective USB-to-IDE bridge; and

a USB controller, wherein the USB-to-IDE bridges are connected to the USB controller via USB bus, each USB-to-IDE bridge providing protocol conversion for communication between the corresponding IDE device and the USB controller, whereby a processor can communicate with the IDE storage devices via the USB controller.

19. (original) The data storage system of claim 18, further comprising a carrier for each IDE data storage device, such that each IDE disk drive and corresponding USB-to-IDE bridge are stored in the respective carrier.

20. (Original) The data storage system of claim 18, wherein one or more IDE storage devices can be disconnected from the system while the system is operating.

21. (previously presented) The data storage system of claim 18, wherein at least a third IDE disk device coupled to a corresponding USB-to-IDE bridge can be connected to the USB controller while the system is operating.

22. (previously presented) The data storage system of claim 18, further comprising at least one USB hub connected between a number of the USB-to-IDE bridges and the USB controller, whereby the processor can communicate with the IDE devices via the USB controller and the USB hub.

23. (previously presented) The data storage system of claim 18, further comprising one or more USB hubs, each USB hub connected between two or more USB-to-IDE bridges and the USB controller.

24. (Original) The data storage system of claim 23, wherein at least one or more IDE storage devices can be disconnected from the system while the system is operating.

25. (Original) The data storage system of claim 23, wherein at least one additional IDE storage device coupled to a corresponding USB-to-IDE bridge can be connected to one of the USB hubs while the system is operating.

26. (Original) The data storage system of claim 23, wherein at least one additional IDE storage device coupled to a corresponding USB-to-IDE bridge and associated hub, can be connected to the USB controller while the system is operating.

27. (previously presented) The data storage system of claim 23, wherein at least one IDE storage device coupled to a corresponding USB-to-IDE bridge and associated hub, can be disconnected from the USB controller while the system is operating.

28. (withdrawn) A data storage array, comprising:

a housing;

a plurality of IDE storage devices disposed in the housing;

a plurality of USB-to-IDE bridges, wherein each IDE storage device is connected to a respective USB-to-IDE bridge; and

a USB controller disposed in the housing such that the USB-to-IDE bridges are connected to the USB controller, whereby a processor can communicate with the IDE storage devices via the USB controller.

29. (withdrawn) The data storage array of claim 28, further comprising:

a circuit board having connectors for directly coupling the IDE storage devices thereto, the circuit board further including circuitry for carrying USB signals from/to the IDE

storage devices.

30. (withdrawn) The data storage array of claim 29, wherein the plurality of the USB-to-IDE bridges are supported by the circuit board and the IDE storage devices are directly coupled to the USB-to-IDE bridges.

31. (withdrawn) The data storage array of claim 30, wherein the plurality of the USB-to-IDE bridges are connected to the circuit board without cables and the IDE storage devices are directly coupled to the USB-to-IDE bridges without cables.

32. (withdrawn) The data storage array of claim 29, further comprising a carrier for each IDE storage device, such that each IDE storage device and corresponding USB-to-IDE bridge are stored in the respective carrier.

33. (withdrawn) The data storage array of claim 29, wherein the plurality of the USB-to-IDE bridges are supported by the circuit board and the IDE storage devices are directly coupled to the USB-to-IDE bridges without cables.

34. (withdrawn) The data storage array of claim 29, wherein the USB controller is directly coupled to a connector on the circuit board without cables.

35. (withdrawn) The data storage array of claim 29, further comprising at least one USB hub in the housing connected between a number of the USB-to-IDE bridges and the USB controller, whereby the processor can communicate with the IDE storage devices via the USB controller and the USB hub.

36. (withdrawn) The data storage array of claim 29, further comprising one or more USB hubs in the housing, each USB hub connected between two or more USB-to-IDE bridges and the USB controller.

37. (withdrawn) The data storage array of claim 28, wherein the housing comprises a rack for supporting packs of the IDE storage devices.

38. (withdrawn) The data storage array of claim 29, the IDE storage devices are removably coupled to connectors on the circuit board without cables.

39. (withdrawn) The data storage array of claim 29, wherein at least one IDE storage device coupled to a corresponding USB-to-IDE bridge, can be disconnected from the disk array only when specified criteria are met.

40. (withdrawn) The data storage array of claim 29, wherein one other IDE storage device can be coupled to the circuit board via a USB-to-IDE bridge when specified criteria are met.

41. (withdrawn) The data storage array of claim 29 further comprising a USB bus on the circuit board for communication between the USB-to-IDE bridges and the USB controller, wherein the USB controller polls the USB bus to determine connection/disconnection of an IDE storage device to/from the circuit board.

42. (withdrawn) The data storage array of claim 29 further comprising a USB bus on the circuit board for communication between the USB-to-IDE bridges and the USB controller, wherein the USB controller does not poll the USB bus to determine connection/disconnection of an IDE storage device to/from the circuit board, reducing USB bus communication overhead.